

Appln. No.: 10/776,822
Amendment Dated February 3, 2005
Reply to Office Action of November 9, 2004

NSG-229US

Remarks/Arguments:

Drawing Figures 1A and 1B were objected to as not including the legend "Prior Art." This ground for objection is overcome by the amended sheet of drawing figures submitted herewith.

Claim 7 is amended to make the name of the claimed invention consistent with claims 3, 4 and 6. Claims 5, 8 are amended to make them consistent with claims 4 and 7 from which they depend. These amendments merely make the claims consistent; they do not narrow the scope of the invention.

Claims 1-8 were rejected under 35 U.S.C. § 102(b) as being anticipated by European patent application no. 0 335 553 to Kusuda et al. (hereinafter Kusuda EP) or by published Japanese patent application no. 02-263668, to Kusuda et al. (hereinafter Kusuda JP). This ground for rejection is overcome by the amendments to claim 1. In particular, neither Kusuda EP, Kusuda JP nor their combination disclose or suggest, "an electrode provided in such a manner that a part thereof makes ohmic contact with the fourth semiconductor layer substantially up to the end face for injecting current into the semiconductor layers," as required by amended claim 1. Basis for this amendment may be found in Figs. 2B, 4B and 5B, all of which show the anode electrode making contact with the 4th layer substantially up to the end face.

In the Office Action it is asserted that Fig. 10 of Kusuda EP discloses all of the elements of claim 1. Applicants note that Fig. 16 of Kusuda JP is essentially the same as Fig. 10 of Kusuda EP. Neither Kusuda EP nor Kusuda JP, however, disclose or suggest a structure in which the electrode makes ohmic contact with the fourth semiconductor layer substantially up to the end face as required by amended claim 1. Both Kusuda EP and Kusuda JP show the electrode making contact with the 4th layer near the central portion of the fourth layer and separated from the end face of the fourth layer by a significant portion of the insulating layer 30.

As described in the specification at page 6, lines 1-7, because the anode electrode makes contact with the 4th layer substantially up to the end face, the external end-face emission of the light-emitting thyristor is increased. As neither Kusuda EP, Kusuda JP nor their combination disclose or suggest an end-face light emitting thyristor or a thyristor with this feature of claim 1, claim 1 is not subject to rejection under 35 U.S.C. § 102(b) in view of

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Kusuda EP, Kusuda JP nor their combination. Claims 2-8 depend from claim 1 and are not subject to rejection under 35 U.S.C. § 102(b) in view of Kusuda EP or Kusuda JP for at least the same reasons as claim 1.

Furthermore, it is noted that Applicant's Admitted prior art (APA) (see Fig. 1B) shows the anode electrode making contact with the 4th layer near the end face of the device. The APA, however, does not disclose or suggest "an insulating layer provided between the fourth semiconductor layer and the part of the electrode that is not made ohmic contact with the fourth semiconductor layer," as required by claim 1. Moreover, it would not be obvious to combine the APA with Kusuda JP or Kusuda EP because the APA concerns an end-face emitting light-emitting thyristor while Kusuda JP and Kusuda EP concern thyristors where light is emitted from the top surface. (See, for example, Fig. 3 of Kusuda EP and column 9, lines 27-35. Because Kusuda EP and Kusuda JP both concern top-face emitting devices, there would be no motivation to modify them as shown in the APA to increase the end-face emission of the device. Indeed, such a modification would be counterproductive as it would decrease the amount of light emitted from the top face of the device.

In view of the foregoing amendments and remark, Applicants request that the Examiner reconsider and withdraw the objection to the drawings and the rejection of claims 1-8.

Respectfully submitted,



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Attachments: Figures 1A-1B (1 sheet)

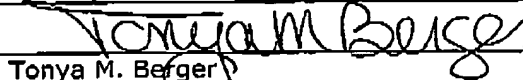
Dated: February 3, 2005

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February 3, 2005



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